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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 09/744,613 | 03/28/2002 | Jack Curtis Taylor | P/3501-9 | 1622 |

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EXAMINER

HOOK, JAMES F

ART UNIT PAPER NUMBER

3752

DATE MAILED: 03/12/2004

16

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/744,613

Applicant(s)

TAYLOR ET AL.

Examiner

James F. Hook

Art Unit

3752

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 April 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-45 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 41-44 is/are allowed.
- 6) ☒ Claim(s) 1-3, 21-24, 26-33 and 35-40 is/are rejected.
- 7) ☒ Claim(s) 4-20, 25, 34 and 45 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 1/01-26-01.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

It is noted that the pre amendment filed April 13, 2001 requests that claims 1-45 be canceled, however, it then provides a new set of claims 1-45 to take their place as per PCT practice, but since this is a US application, claim sheets cannot be substituted. Since the new claims are numbered 1-45, to prevent confusion, the request to cancel claims 1-45 will be ignored in that it is believed such was in error, and rather it was expected that the amended claims of 4/13/01 will take the place of the original claims in the case. If such was not the intent, then it is requested that the next response to this office action that all claims be cancelled and new claims having numbers starting after 45 be used instead.

Applicant is advised that should claim 1 be found allowable, claim 35 will be objected to under 37 CFR 1.75 as being a substantial duplicate thereof. When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-3, 35-37, and 40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Driver in view of Wood. The patent to Driver discloses the recited method of assembling a tubular system comprising attaching an elongate member 2 in the form of a leak sensor wire to a liner sleeve 8,14,12, the wall of the liner defines a hollow bore inside a tubular A (fig. 2), where the elongate member is disposed between the liner and the tubular to define a passage which can have flow upon leaking of the liner and therefore is considered a flow passage, the elongate member and liner are pulled into the tubular, the liner deforms to form the passage and at the same time is essentially forming a channel in the liner, the wire transmits signals so is inherently a communications cable and carries electrical energy in the wires provided in the cable outer wall. The patent to Driver discloses all of the recited method with the exception of stating that the elongate member is pulled to pull the liner. The patent to Wood discloses the recited method of assembling a tubular system comprising a tubular 16, a liner 10 having an elongate member 46 attached to the liner, which is attached to the leading end of the liner and is attached to a push rod 42 that creates a pulling force on the member 46 to pull the sleeve into the tubular. It would have been obvious to one skilled in the art to modify the pulling method in Driver by pulling the elongate member attached to the liner to pull the liner into the tubular as suggested by Wood as such would help prevent tearing of the liner or stretching of the liner.

Claims 21-24 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Blackmore in view of Wood. The patent to Blackmore discloses the recited tubular system comprising attaching an elongate member 24 in the form of a conductive plastic

or the equivalent of a resistive wire formed of the fibers which are connected to a liner sleeve 10, the wall of the liner defines a hollow bore inside a tubular 12, where the elongate member is disposed between the liner and the tubular in a channel formed between fiberglass strips 26, the elongate member and liner are pulled into the tubular, the wire transmits electrical energy to create heat thereby being the equivalent of a heating element. The patent to Blackmore discloses all of the recited system with the exception of stating that the elongate member is pulled to pull the liner. The patent to Wood discloses the recited method of assembling a tubular system comprising a tubular 16, a liner 10 having an elongate member 46 attached to the liner, which is attached to the leading end of the liner and is attached to a push rod 42 that creates a pulling force on the member 46 to pull the sleeve into the tubular. It would have been obvious to one skilled in the art to modify the pulling method in Blackmore by pulling the elongate member attached to the liner to pull the liner into the tubular as suggested by Wood as such would help prevent tearing of the liner or stretching of the liner.

Claims 27-33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Driver in view of Charboneau. The patent to Driver discloses the recited system to monitor a tubular system where the elongate member is a sensing member. The patent to Driver discloses all of the recited system with the exception of using the wire to monitor stress and thereby giving an accurate position of a problem with the tube, where use to locate blockage is merely intended use which inherently a strain type of sensor would sense, and to form the sensor of at least one fiber optic used as a strain gauge. The patent to Charboneau discloses the recited detection system for detecting

problems with a liner for a pipe where a fiber optic cable can be provided to detect stress and would be the equivalent of a strain gauge in the manner in which it functions, to detect leakage as well as blockage (col. 3, lines 55-61) and to determine the point of the problem. It would have been obvious to one skilled in the art to modify the elongate element in Driver to be a fiber optic strain gauge to allow for the determination of where a leak in a pipe may occur and at that same time can detect blockages as suggested by Charboneau where such would provide a more useful detection system that could not only detect leaks but blockages as well.

Claim 38 is rejected under 35 U.S.C. 103(a) as being unpatentable over Driver in view of Wood as applied to claims 1-3, 35-37, and 40 above, and further in view of Blackmore. The patent to Driver as modified discloses all of the recited structure with the exception of forming the elongate member as a heating element. It would have been obvious to one skilled in the art to modify the elongate member of Driver as modified by connecting the conductors to a power source to create heat thereby making the member a heater as suggested by Blackmore as such would allow the elongate member to be used to help cure the liner to the tubular thereby improving the utility of the liner.

Claim 39 is rejected under 35 U.S.C. 103(a) as being unpatentable over Driver in view of Wood as applied to claims 1-3, 35-37, and 40 above, and further in view of Charboneau. The patent to Driver as modified discloses all of the recited structure with the exception of forming the elongate member as a force sensing cable. It would have been obvious to one skilled in the art to modify the elongate member of Driver as

Art Unit: 3752

modified by forming it of a force sensing member as suggested by Charboneau to allow for not only leak detection but blockage detection also thereby improving the utility of the liner.

Allowable Subject Matter

Claims 41-44 are allowed.

Claims 4-20, 25 , 34, and 45 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

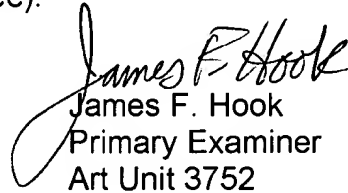
The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The patents to Long, Jr., Mandich, Chick, Kiest, Jr., Connor, and Taylor (079, 574, 600, and 388) disclosing state of the art liners.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to James F. Hook whose telephone number is (703) 308-2913. The examiner can normally be reached on Monday to Wednesday, work at home Thursdays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Mar can be reached on (703) 308-2087. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 3752

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


James F. Hook
Primary Examiner
Art Unit 3752

JFH